

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

# Region 1 1 Congress Street, Suite 1100 BOSTON, MA 02114-2023

# CERTIFIED MAIL - RETURN RECEIPT REQUESTED

November 10, 2010

Michael Coty, Project Manager Agent for Nexus, Inc., ENPRO Services Inc. 12 Mulliken Way Newburyport MA 01950

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000.Residential Property site at 44 School Street, Arlington, MA 02476-6112; Authorization # MAG910391- Reissuance.

Dear Mr. Coty:

Based on the review of your Notice of Intent (NOI) submitted on behalf of he owner for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants for which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: <a href="http://www.epa.gov/region1/npdes/mass.html#dgp">http://www.epa.gov/region1/npdes/mass.html#dgp</a>.

Please note also the following 1) the list of pollutants attached to this authorization is subject to a recertification (See Part I.C.8., on Page 16 of the RGP), if the operations at the site result in a discharge lasting longer than six months and 2) with a dilution factor of 8.7 at Mill Brook the compliance limits for the following metals are: for antimony 48.7 ug/L, for arsenic 87 ug/L, for copper 45.24 ug/l, for nickel 252.3 ug/l, and for zinc 579.4 ug/l. At this dilution the compliance limit for iron of 5,000 ug/L is based on the RGP (See the 2005 RGP Fact Sheet, under Metals Limitations on Page 65.)

This general permit and authorization to discharge will expire on September 9, 2015. You reported that this project would terminate on September 20, 2011. If for any reason, the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez. Victor@epa.gov, if you have any questions.

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Sincerely,

David M. Webster, Chief Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP

# 2010 Remediation General Permit Summary of Monitoring Parameters<sup>[1]</sup>

NPDES Permit Number:		MAG910391					
Date Permit Issued:	Nove	mber 2010					
Facility/Site Name:		idential Property					
		hool Street, Arlington, MA 024776-6122 - Middlesex County					
- demey/ orde / tauress.	Email	l address of owner; NA; Tel.n: 781 935.0611					
Legal Name of operato	or:	Agent for Nexus, Inc., ENPRO Services, Inc.					
Operator contact name, title, and Address:		Michael Cata B					
and Address.	أوران وتتشر	Email MFDacey@geoinc.com					
Estimated Date of Com	pletion	September 20, 2011					
Category and Sub-Category:		Category I, Petroleum Related Site Remediation, Sub-category B- Fuel Oils and Other Oils Sites					
Receiving Water:		Mill Brook					

# Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	Ama ha zagazaniana Am	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily
	<u>Parameter</u>	Maximum limit, unless denoted by a **, in which case it is a Monthly Average Limit)
√	Total Suspended Solids     (TSS)	30 milligrams/liter (mg/l) **, 50 mg/l for hydrostatic testing **, Me#60.2/5mL
	Total Residual Chlorine (TRC)	Freshwater = 11 ug/l ** Saltwater = 7.5 ug/l **/ Me#330.5/ML 20ug/L
√	Total Petroleum     Hydrocarbons (TPH)	5.0 mg/l/ Me# 1664A/5.0mg/LmL
	4. Cyanide (CN) <sup>2, 3</sup>	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/l **/ Me#335.4/ML 5ug/L
V	5. Benzene (B)	5ug/L /50.0 ug/l for hydrostatic testing only/ Me#8260C/ML 2 ug/L
√	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
<b>√</b>	7. Ethylbenzene (E)	(limited as ug/L total BTEX) )/ Me#8260C/ ML 2ug/L
√	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) )/ Me#8260C/ ML 2ug/L
√	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) <sup>4</sup>	100 ug/l )/ Me#8260C/ ML 2ug/L
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l /Me#8260C/ ML 10ug/L

	<u>Parameter</u>	Effluent Limit/Method#/ML  (All Effluent Limits are shown as Daily Maximum limit, unless denoted by a **, in which case it is a Monthly Average Limit)
	12.tert-Butyl Alcohol (TBA)	Monitor Only (ug/L)/ Me#8260C/ ML
	(TertiaryButanol)	10ug/L
กนณ์	13. tert-Amyl Methyl Ether (TAME)	Monitor Only (ug/L) /Me#8260C/ ML 10ug/L
$\sqrt{}$	14. Naphthalene <sup>5</sup>	20 ug/l /Me#8260C/ ML 2ug/L
11 - 1	15. Carbon Tetrachloride	4.4 ug/l /Me#8260C/ ML 5ug/L
81718	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/l /Me#8260C/ ML 5ug/L
77	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/l /Me#8260C/ ML 5ug/L
g terri	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/l /Me#8260C/ ML 5ug/L
T-	18a. Total dichlorobenzene	763 ug/l - NH only /Me#8260C/ ML5ug/L
-	19. 1,1 Dichloroethane (DCA)	70 ug/l /Me#8260C/ ML 5ug/L
-	20. 1,2 Dichloroethane (DCA)	5.0 ug/l /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/l/Me#8260C/ ML 5ug/L
<del></del>	22. cis-1,2 Dichloroethene (DCE)	70 ug/l /Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/l/Me#8260C/ ML 5ug/L
with	24. Tetrachloroethene (PCE)	5.0 ug/l /Me#8260C/ ML 5ug/L
1979	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/l/Me#8260C/ ML 5ug/L
ioh	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/l /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/l /Me#8260C/ ML 5ug/L
11	28. Vinyl Chloride (Chloroethene)	2.0 ug/l /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only (ug/L) /Me#8260C/ ML 50ug/L
1,0	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML50 ug/L
- 0	31. Total Phenols	300 ug/l Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML50 ug/L
<b>√</b>	32. Pentachlorophenol (PCP)	1.0 ug/l /Me#8270D/ML5ug/L,Me#604 &625/ML10ug/L
<b>√</b>	33. Total Phthalates (Phthalate esters) <sup>6</sup>	3.0 ug/L ** /Me#8270D/ML5ug/L,Me#606/ML10ug/L& Me#625/ML5ug/L
<b>√</b>	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/l /Me#8270D/ML5ug/L,Me#606/ML10ug/L8 Me#625/ML5ug/L
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/l
	a. Benzo(a) Anthracene <sup>7</sup>	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
83	b. Benzo(a) Pyrene <sup>7</sup>	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L

ed mi	<u>Parameter</u>	Effluent Limit/Method#/ML  (All Effluent Limits are shown as Daily Maximum, and Monthly Average if denoted by a **)
1	e. Chrysene <sup>7</sup>	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	f. Dibenzo(a,h)anthracene <sup>7</sup>	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	g. Indeno(1,2,3-cd) Pyrene <sup>7</sup>	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
<b>√</b>	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/l
<b>√</b>	h. Acenaphthene	X/Me#8270D/ML5ug/L,Me#610/ML5ug /L & Me#625/ML5ug/L
	i. Acenaphthylene	X/Me#8270D/ML5ug/L,Me#610/ML5ug/L & Me#625/ML5ug/L
	j. Anthracene	X/Me#8270D/ML5ug/L,Me#610/ML5ug/L & Me#625/ML5ug/L
-	k. Benzo(ghi) Perylene	X/Me#8270D/ML5ug/L,Me#610/ML5ug/L & Me#625/ML5ug/L
	I. Fluoranthene	X/Me#8270D/ML5ug/L,Me#610/ML5ug/L & Me#625/ML5ug/L
<b>√</b>	m. Fluorene	X/Me#8270D/ML5ug/L,Me#610/ML5ug/L & Me#625/ML5ug/L
12200	n. Naphthalene <sup>5</sup>	20 ug/l / Me#8270D/ ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
<b>√</b>	o. Phenanthrene	X/Me#8270D/ML5ug/L,Me#610/ML5ug/L & Me#625/ML5ug/L
<b>√</b>	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML5ug/L & Me#625/ML5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) 8, 9	0.000064 ug/L / Me# 608/ ML 0.5 ug/L
$\checkmark$	38. Chloride	Monitor only/Me# 300.0/ ML 0.1ug/L

_	as symptom a	110000000000000000000000000000000000000		C# 300.0, ME 0.11		
	de Sympholim (1 H 2	Metal Limit	@ H <sup>10</sup> = 50 CO3 for ges in	Total Recoverable Metal Limit @ H <sup>10</sup> = 25 mg/l CaCO3 for Discharges in New Hampshire (ug/l) <sup>11</sup>		
	Metal parameter	Freshwater	Saltwater	Freshwater	Saltwater	
$\checkmark$	39. Antimony	48.72	LOmL			
$\checkmark$	40. Arsenic **	87/20mL	36/20mL			
	41. Cadmium **	0.2/10ml	8.9/10mL			
	42. Chromium III (trivalent) **	48.8/15mL	100/15mL		BESTUTTINE"	
	43. Chromium VI (hexavalent) **	11.4/10mL	50.3/10mL	The crestman wal	Tarrottiá:	
$\checkmark$	44. Copper **	45.24/15mL	3.7/15mL	atheli an desert isovin	per treet right	
	45. Lead **	1.3/20mL	8.5/20mL			
	46. Mercury **	0.9/0.2mL	1.1/0.2mL			

	A STREET STREET OF STREET STRE	Total Reco Metal Limit ( mg/l Cat dischar Massachuset	@ H <sup>10</sup> = 50 CO3 for ges in	Total Recoverable Metal Limit @ H <sup>10</sup> = 25 mg/l CaCO3 for Discharges in New Hampshire (ug/l) <sup>11</sup>		
	Metal parameter	Freshwater	Saltwater	Freshwater	Saltwater	
$\checkmark$	47. Nickel **	252.3/20mL	8.2/20mL	ignetica, a societa	40 37	
	48. Selenium **	5/20mL	71/20mL			
	49. Silver	1.2/10mL	2.2/10mL	可 (1) 1 (1) (1) (1) (1) (1)	現 双	
<b>√</b>	50. Zinc **	579.42/15mL	85.6/15mL	Soft in Contract Soft !	àia "	
<b>√</b>	51. Iron	8700/2	20mL	SSSMEAN WAS ARREST	ANGEN	

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Trans.	Other Parameters	Limit
<b>√</b>	52. Instantaneous Flow	Site specific in CFS
V	53. Total Flow	Site specific in CFS
l Xmid	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab <sup>13</sup>
mul	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab <sup>13</sup>
<b>√</b>	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab <sup>13</sup>
_UX	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab <sup>14</sup>
Noen	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab <sup>14</sup>
Khm	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab <sup>14</sup>
D)\p	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab <sup>14</sup>
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab <sup>14</sup>
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab <sup>14</sup>
ett. ji NGO	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab <sup>14</sup>
MARK	64. Maximum Change in Temperature in MA – Any Class SB water body - October to June	4°F; 1/Month/Grab <sup>14</sup>

# Footnotes:

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Jani Lyde Although the maximum values for TRC are 11ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).

<sup>2</sup> Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.

Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).

BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

<sup>5</sup> Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.

<sup>6</sup> The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of

the test method used as listed in Appendix VI.

Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as

listed in Appendix VI.

<sup>8</sup> In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses." Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).

Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

11 For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using DF x 1,000ug/L (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit =1,000 x 2 =2,000 ug/L, etc. not to exceed the DF=5.

Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratorydetermined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.

Temperature sampling per Method 170.1

# B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General facility/site information. Please provide the following information about the site:

a) Name of <b>facility/site</b> : Residential Property		Facility/site mail	Facility/site mailing address:					
Location of <b>facility/site</b> : longitude: 71 10'20.872 latitude: 42 25'9.776	Facility SIC code(s):	Street: 44 School S	treet					
b) Name of <b>facility/site owner:</b>		Town: Arlington						
Email address of facility/site owner:  NA  Telephone no. of facility/site owner: (781) 9	35-0611	State:	Zip: 02476-6122	County:  Middlesex				
Fax no. of facility/site <b>owner</b> : NA  Address of <b>owner</b> (if different from site):	Owner is (check one): 1. Federal O 2. State/Tribal O 3. Private O 4. Other O if so, describe:							
Street: 888 Main Street								
Town: Woburn	State: MA	Zip: 01801	County: Middlesex	:				
c) Legal name of <b>operator</b> :	Operator te	ephone no: (978) 465-1595						
Agent for Nexus, Inc. ENPRO Services, Inc.	Operator fa	x no.: (978) 465-2050	Operator email:	Operator email: mcoty@enpro.com				
<b>Operator</b> contact name and title: Michael Co	ment Plant Operator-Grade 1	2						
Address of <b>operator</b> (if different from owner):	Street: 12 Mu	lliken Way						
Town: Newburyport	State: MA	Zip: 01950	County: Essex					

d) Check Y for "yes" or N for "no" for the following:  1. Has a prior NPDES permit exclusion been granted for to the second of t	en filed for the discharge?
e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y O NO If Y, please list:  1. site identification # assigned by the state of NH or MA: RTN 3-27857  2. permit or license # assigned:  3. state agency contact information: name, location, and telephone number:  Mr. Steven Ross, MADEP (978) 694-3213	f) Is the site/facility covered by any other EPA permit, including:  1. Multi-Sector General Permit? Y O N O,     if Y, number:  2. Final Dewatering General Permit? Y O N O,     if Y, number:  3. EPA Construction General Permit? Y O N O,     if Y, number:  4. Individual NPDES permit? Y O N O,     if Y, number:  5. any other water quality related individual or general permit? Y O N O, if Y, number:
g) Is the site/facility located within or does it discharge to	an Area of Critical Environmental Concern (ACEC)? Y N O
h) Based on the facility/site information and any historica discharge falls.	al sampling data, identify the sub-category into which the potential
Activity Category	Activity Sub-Category
I - Petroleum Related Site Remediation	A. Gasoline Only Sites  B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges)  C. Petroleum Sites with Additional Contamination
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites B. VOC Sites with Additional Contamination C. Primarily Heavy Metal Sites
III - Contaminated Construction Dewatering	A. General Urban Fill Sites   B. Known Contaminated Sites

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites B. Well Development/Rehabilitation at Contaminated/Formerly
	Contaminated Sites
	C. Hydrostatic Testing of Pipelines and Tanks
	D. Long-Term Remediation of Contaminated Sumps and Dikes
	E. Short-term Contaminated Dredging Drain Back Waters (if not covered
	by 401/404 permit)
2. Discharge information. Please provide information	about the discharge, (attaching additional sheets as necessary) including
a) Describe the discharge activities for which the owner/a	pplicant is seeking coverage:
The subsurface was impacted by a release of #2 fuel oil from an abor involves the treatment and discharge of collected groundwater to the	ve-ground storage tank located in the basement of the residence. The discharge he local storm drain system on School Street.
b) Provide the following information about each discharge	e:
1) Number of discharge 2) What is the <b>maximum</b> a	and average flow rate of discharge (in cubic feet per second, ft <sup>3</sup> /s)?
points: Max. flow 0.02	s maximum flow a design value? Y O N O
One Average flow (include unit	
3) Latitude and longitude of each discharge within 100 fe	et:
pt.1: lat 71 10'19.56 long 42 25'10.59 pt.2: lat.	long. ;
pt.3: lat long pt.4: lat.	long. ;
pt.5: lat long pt.6: lat.	long. ;
pt.7: lat long pt.8: lat.	long. ; etc.
4) If hydrostatic testing, 5) Is the discharge intermit	tent • or seasonal • ?
total volume of the Is discharge ongoing? Y	$\circ$ N $\circ$
discharge (gals): NA	
c) Expected dates of discharge (mm/dd/yy): start 09/20/2010	
d) Please attach a line drawing or flow schematic showing	
•	peration, 3. treatment units, and 4. discharge points and receiving
waters(s).	

# 3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is believed present or believed absent in the potential discharge. Attach additional sheets as needed.

					Sample	Analytical	Minimum	Maximum dai	ily value	Average daily	<u>value</u>
<u>Parameter *</u>	<u>CAS</u> <u>Number</u>	Believed Absent	Believed Present	# of Samples	Type (e.g., grab)	Method Used (method #)	Level (ML) of Test Method	concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)			×	7	grab	2504D	5000	68,000	.000009	24,250	.000003
2. Total Residual Chlorine (TRC)		×		1	grab	330.520	20				
3. Total Petroleum Hydrocarbons (TPH)			×	7	grab	8015B		7,310	.001	1,040	.0001
4. Cyanide (CN)	57125	×		1	grab	335.4	10				
5. Benzene (B)	71432		X	7	grab	8260	2	<1.0		<1.0	
6. Toluene (T)	108883		X	7	grab	MAVPH	2	0.28	<0.000001	<1.0	<0.0000001
7. Ethylbenzene (E)	100414		×	7	grab	MAVPH	2	1.8	<0.000003	<1.0	<0.0000001
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207		×	7	grab	MAVPH	3				
9. Total BTEX <sup>2</sup>	n/a		×	7	grab	MAVPH	3	9.5	<0.000001	1.90	<0.000001
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) <sup>3</sup>	106934	×		1	grab	8260	0.02				
11. Methyl-tert-Butyl Ether (MtBE)	1634044	×		1	grab	8260	2.0				
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	×		1	grab	8260	100				

<sup>\*</sup> Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

<sup>&</sup>lt;sup>2</sup> BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.
<sup>3</sup> EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

<u>Parameter *</u>	<u>CAS</u> <u>Number</u>	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum dai	mass (kg)	Average daily concentration (ug/l)	walue mass (kg)
13. tert-Amyl Methyl Ether (TAME)	9940508	×		1	grab	8260	0.5				
14. Naphthalene	91203		X	7	grab	MAVPH	2	6	<0.00001	1.54	<0.000001
15. Carbon Tetrachloride	56235	×		1	grab	8260	2				
16. 1,2 Dichlorobenzene (o-DCB)	95501	×		1	grab	8260	1.97				
17. 1,3 Dichlorobenzene (m-DCB)	541731	×		1	grab	8260	2				
18. 1,4 Dichlorobenzene (p-DCB)	106467	×		1	grab	8260	1.97				
18a. Total dichlorobenzene		×		1	grab	8260	2				
19. 1,1 Dichloroethane (DCA)	75343	×		1	grab	8260	1				
20. 1,2 Dichloroethane (DCA)	107062	×		1	grab	8260	1.97				
21. 1,1 Dichloroethene (DCE)	75354	×		1	grab	8260	2				
22. cis-1,2 Dichloroethene (DCE)	156592	×		1	grab	8260	2				
23. Methylene Chloride	75092	×		1	grab	8260	2				
24. Tetrachloroethene (PCE)	127184	X		1	grab	8260	2				
25. 1,1,1 Trichloro-ethane (TCA)	71556	×		1	grab	8260	2				
26. 1,1,2 Trichloro-ethane (TCA)	79005	×		1	grab	8260	2				
27. Trichloroethene (TCE)	79016	×		1	grab	8260	2				

					Sample	Analytical	<u>Minimum</u>	Maximum dai	<u>ly value</u>	Average daily	<u>value</u>
<u>Parameter *</u>	<u>CAS</u> <u>Number</u>	Believed Absent	Believed Present	# of Samples	Type (e.g., grab)	Method Used (method #)	Level (ML) of Test Method	concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
28. Vinyl Chloride (Chloroethene)	75014	×		1	grab	8260	1.46				
29. Acetone	67641	×		1	grab	8260	50				
30. 1,4 Dioxane	123911	×		1	grab	8260	24				
31. Total Phenols	108952	×		1	grab	8270C	0.24				
32. Pentachlorophenol (PCP)	87865		×	1	grab	8270C	0.57			0.90	<0.0001
33. Total Phthalates (Phthalate esters) <sup>4</sup>			×	1	grab	8270C	0.73			1.78	<0.0001
34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	117817		×	1	grab	8270C	1.34			0.99	<0.0001
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		×									
a. Benzo(a) Anthracene	56553	×		1	grab	8270C	0.99				
b. Benzo(a) Pyrene	50328	×		1	grab	8270C	0.64				
c. Benzo(b)Fluoranthene	205992	×		1	grab	8270C	0.83				
d. Benzo(k)Fluoranthene	207089	×		1	grab	8270C	0.99				
e. Chrysene	21801	×		1	grab	8270C	1.15				
f. Dibenzo(a,h)anthracene	53703	×		1	grab	8270C	0.54				
g. Indeno(1,2,3-cd) Pyrene	193395	×		1	grab	8270C	0.67				
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)			×								

<sup>&</sup>lt;sup>4</sup> The sum of individual phthalate compounds.

					Sample	Analytical	Minimum	Maximum dai	ly value	Average daily	value
<u>Parameter *</u>	<u>CAS</u> <u>Number</u>	Believed Absent	Believed Present	# of Samples	Type (e.g., grab)	Method Used (method #)	Level (ML) of Test Method	concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329		×	1	Grab	8270C	1			4.1	<0.00001
i. Acenaphthylene	208968	×		1	Grab	8270C	0.92				
j. Anthracene	120127	X		1	Grab	8270C	1.15				
k. Benzo(ghi) Perylene	191242	×		1	Grab	8270C	0.70				
1. Fluoranthene	206440	×		1	Grab	8270C	1				
m. Fluorene	86737		×	1	Grab	8270C	1.15			5.3	<0.00001
n. Naphthalene	91203		X	1	Grab	8270C	2			28	<0.00001
o. Phenanthrene	85018		×	1	Grab	8270C	0.64			8.2	<0.00001
p. Pyrene	129000		×	1	Grab	8270C	1.88			1.5	<0.00001
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	×		1	Grab	8082	0.3				
38. Chloride	16887006	×		1	Grab	6010B					
39. Antimony	7440360		×	1	Grab	6010B	11.7			4.7	<0.00001
40. Arsenic	7440382		×	1	Grab	6010B	5			4.0	<0.00001
41. Cadmium	7440439	X		1	Grab	6010B	2.19				
42. Chromium III (trivalent)	16065831	×		1	Grab	7196A	10				
43. Chromium VI (hexavalent)	18540299	×		1	Grab	7196A	1.2				
44. Copper	7440508		×	1	Grab	6010B	5			34	<0.00001
45. Lead	7439921	×		1	Grab	6000	4.5				
46. Mercury	7439976	×		1	Grab	7470A	0.2				
47. Nickel	7440020		×	1	Grab	6010B	4.13			3.5	<0.00001
48. Selenium	7782492	×		1	Grab	6010B	19.4				
49. Silver	7440224	X		1	Grab	6010B	4.45				
50. Zinc	7440666		×	1	Grab	6010B	10			8	<0.00001
51. Iron	7439896		×	7	Grab	6010B	63.6	29,000	0.004	10,800	0.000016
Other (describe):											

					Sample	Analyti	ical	Minimum	Maximun	n daily value	Average daily	valu
Parameter *	<u>CAS</u> <u>Number</u>	Believed Absent	Believed Present	# of Samples	Type (e.g., grab)	Method Used (method	<u>od</u>	Level (ML) of Test Method	concentrat (ug/l)	ion mass (kg)	concentration (ug/l)	<u>m</u>
b) For discharges when  Step 1: Do any of the Appendix III (i.e., the  Step 2: For any metals dilution factor (DF) instructions or as dete What is the dilution fa  Metal: iron Metal: copper Metal: Metal: Etc.	metals in the limits set and set which excusing the formula by actor for ap	ne influer at zero dil ceed the A ormula in the State	nt exceed th lution)? Y_ Appendix I Part I.A.3.0 prior to the	e effluent l  N  N  II limits, ca  c (step 2) o	imits in alculate the f the NOI	Loo facto influence facto Y	es, when designed established	pper the limit ca Appendix I have the polimits in Ap ation above	lculated at IV. Do any tential to eppendix IV	the correspond y of the metal exceed the co (i.e., is the interest at the calculation	rresponding	
4. Treatment system is a) A description of the Groundwater is pumped from granulated activated carbo	e treatment	system,	including a	schematic	of the propo	osed or e	existin	ig treatmen	t system:		ate filter and two	_
b) Identify each	Frac. ta	ank 🗖 🛮 🗚	Air stripper	□ Oil/v	vater separa	tor 🗖		Equalization	n tanks 🗵	Bag filter	GAC filter	×
applicable treatment unit (check all that apply):	Chlorin		De- chlorination		r (please de	scribe):	pH adj	justment if ne	ecessary			

c) Proposed <b>average</b> and <b>maximum</b> the treatment system: Average flow rate of discharge 5.5 Design flow rate of treatment system	gpm N	lons per minute) f Maximum flow rat gpm	_		rate(s) (gallons per minute) of gpm		
d) A description of chemical additive	es being used or	planned to be use	ed (attach MSDS s	sheets):			
Sodium Hydroxide Solution-25% (if warranted t	o maintain pH betwe	een 6.0-8.3). See pH lim	it modification approv	al letters attached.			
5. Receiving surface water(s). Pleas	se provide infor	mation about the r	eceiving water(s),	using separate sho	eets as necessary:		
a) Identify the discharge pathway:	Direct to receiving water	Within facility (sewer)	Storm drain 🗵	Wetlands	Other (describe):		
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:  Discharge of treated groundwater will be to a storm water catch basin located in front of 44 School Street. The storm drain discharges to Mill Brook.							
Discharge of treated groundwater will be to	o a storm water cat	ch basin located in fi	ont of 44 School Stre	eet. The storm drain o	lischarges to Mill Brook.		
<ol> <li>For multiple discharges, number to</li> <li>For indirect dischargers, indicate to</li> <li>The map should also include the local</li> </ol>	c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:  1. For multiple discharges, number the discharges sequentially.  2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water. The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.						
d) Provide the state water quality cla	ssification of th	e receiving water	3				
e) Provide the reported or calculated Please attach any calculation sheets					cfs		
f) Is the receiving water a listed 303(	(d) water quality	impaired or limit	ed water? Y 💿	N_O_If yes, for	which pollutant(s)?		
Is there a final TMDL? Y O N	If yes, for w	hich pollutant(s)?	Pathogens and other habitat	t alterations (non-pollutant)			

# 6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?  A O B O C O D O E O F O  b) If you selected Criterion D or F, has consultation with the federal services been completed? Y O N O Underway
c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Y O NOA
d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.
e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?  1 _ O _ 2 _ O _ 3 _ O _
f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

# 7. Supplemental information.

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

Per Section 2-Data Summary Table for treatment system monitoring

Per Section 3, Contaminant Information, Calculation of Dilution Factor for MA Applicants: DF=(Qd+Qs)/Qd where: DF=Dilution Factor, Qd=maximum flow rate of discharge in CFS (Calculated 0.013 CFS for this system), Qs=Receiving water 7Q10 flow rate (from http://ma.water.usgs.gov/streamstats)(0.17 cfs for this site). DF=8.69 cfs

Per Section 4, Copy of treatment system flow schematic, sodium hydroxide MSDS, pH limit modification request and approval letters.

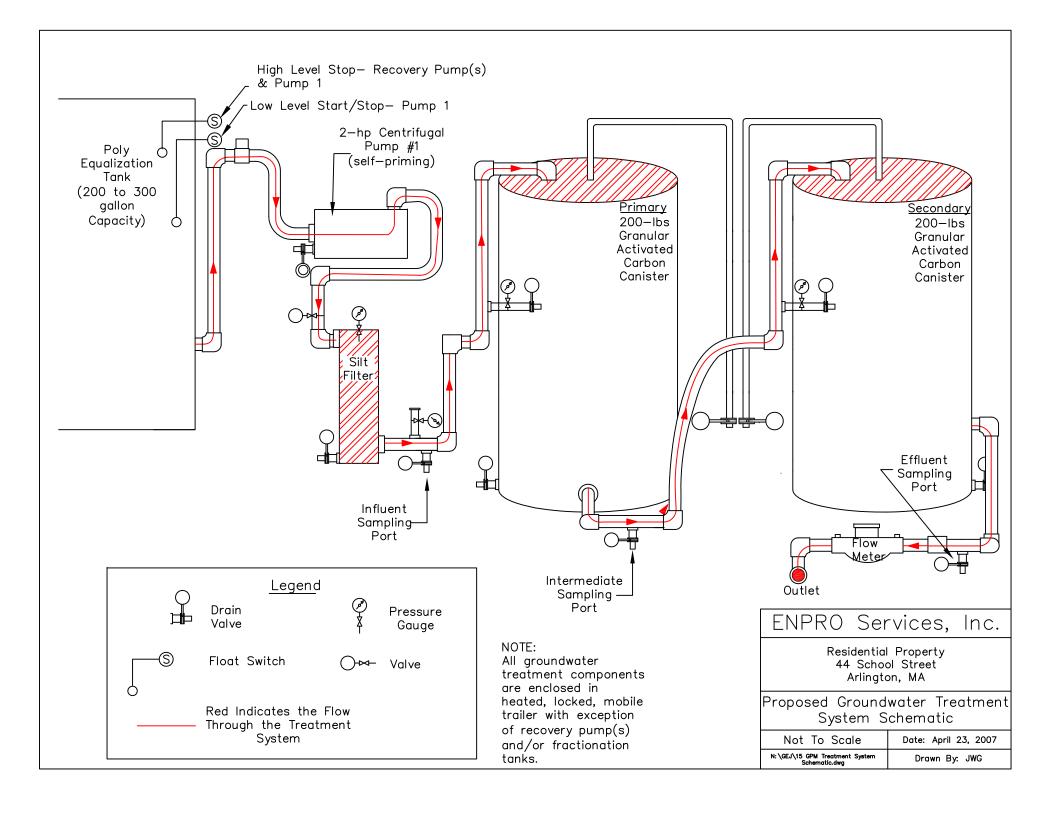
Per Section 5, Site Locus Map, MassGIS Priority Resources Map, System Discharge Map, Receiving Waters Classification Map, 7Q10 data listing, and TMDL listing.

Per Section 6-ESA and NHPA documentation. For Small Whorled Pagonia-No Critical Habitat Rules are Established. For Sand Plain Gerardia, -No Critical Habitat Rules are Established. NRHP Map from Google Earth.

**8. Signature Requirements:** The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: NEXUS, INC.
Operator signature:
Printed Name & Title: MICHAEL COTY, WWTPO
Date: 10/15/10





P.O. Box 527

Calvert City, KY 42029-0527

# MATERIAL SAFETY DATA SHEET

ISSUED: 06/01/06

**SODIUM HYDROXIDE SOLUTION - 25%** 

**REVISED: 06/01/06** 

# SECTION I - PRODUCT IDENTIFICATION

Westlake CA&O 2468 Industrial Parkway P O Box 527 Calvert City, KY 42029

Telephone No.: (270) 395-4151 Transportation Emergency No.: CHEMTREC: (800) 424-9300

Medical Emergency No.:

POISON CENTER: (216) 379-8562

Chemical Family: Alkali

Chemical Name/Synonyms: Solutions of: Caustic, Caustic soda, Lye, Sodium hydrate

Trade Mark: None Formula: Mixture

C.A.S. Registry No.: 1310-73-2

TSCA Inventory Status: All ingredients are listed on the USEPA's TSCA inventory

Canadian Domestic Substances List Status: All ingredients have been nominated or are

eligible for inclusion

Workplace Hazardous Materials Information System (WHMIS) Classification: E

Product Use: Caustic Applications SARA 313 Information: Not Applicable.

# SECTION II - HAZARDOUS INGREDIENTS

Hazard Summary Statement: CAUTION! CORROSIVE LIQUID. Contact with skin results in severe burns with possible deep ulceration. Eye contact will produce severe and painful injury. Inhalation of mists causes irritation of the nose, throat, mucous membranes and lungs.

Material	C.A.S.	Amount	ACGIH	OSHA
	<u>Number</u>	in Product	<u>TLV-TWA</u>	<u>PEL-TWA</u>
Sodium Hydroxide <sup>2,4,5,6</sup>	1310-73-2	23-28%	2 mg/m <sup>3</sup> ceiling	2 mg/m <sup>3</sup>

N.A. - Not Applicable

N.E. - Not Established

# Legislative Footnotes

# Notes:

TLV-TWA - Threshold Limit Value - Time Weighted Average guideline for

concentration of the chemical substance in the ambient workplace air.

American Conference of Governmental Industrial Hygienists

(ACGIH).

OSHA PEL - OSHA Permissible Exposure Limit, 8-hour TWA. 29 CFR 1910.1000,

Transitional Limit column, Table Z-1-A, Table Z-2 and Table Z-3.

# **SECTION III - PHYSICAL DATA**

Appearance: Water white, semi-Specific Gravity: 1.28 @ 20°C (68°F)

viscous liquid

Odor: Mild, slightly pungent pH: 14 (strong alkali)

Percent Volatiles: 72-77% Boiling Point: 113°C (235°F)
Solubility in Water: Soluble Vapor Pressure: 7 mm Hg @ 60°F

Physical State: Liquid Vapor Density: N.A.

Freezing Point: 17.2°C (1°F)

# SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not combustible. Flammable Limits in Air: N.A.

Lower Explosive Limit (LEL): N.A. <u>Upper Explosive Limit (UEL)</u>: N.A.

Self-Ignition Temperature: N.A.

<sup>&</sup>lt;sup>1</sup> Ingredient listed on SARA Section 313 List of Toxic Chemicals.

<sup>&</sup>lt;sup>2</sup> Ingredient listed on the *Pennsylvania Hazardous Substances List*.

<sup>&</sup>lt;sup>3</sup> Ingredient listed on the California listing of *Chemicals Known to the State to Cause Cancer or Reproductive Toxicity*.

<sup>&</sup>lt;sup>4</sup> Ingredient listed on the *Massachusetts Substance List*.

<sup>&</sup>lt;sup>5</sup> Workplace Hazardous Materials Information System ingredient found on the Ingredient Disclosure List - Canada.

<sup>&</sup>lt;sup>6</sup> Ingredient listed on the New Jersey Right to Know Hazardous Substance List.

### Notes:

<u>Flash Point</u>: The lowest initial temperature of air passing around the specimen at which sufficient combustible gas is evolved to be ignited by a small external pilot flame.

<u>Self-Ignition Temperature</u>: The lowest initial temperature of air passing around the specimen at which, in absence of an ignition source, ignition occurs of itself, as indicated by an explosion, flame or sustained glow.

<u>Extinguishing Media</u>: Although not combustible, should a fire involve the product, flood with water using care not to splash or splatter this material.

<u>Special Firefighting Procedures</u>: As with most fire conditions, it is proper to wear a positive pressure self-contained breathing apparatus (SCBA). Personnel not wearing suitable protection must be removed from the area. In enclosed or poorly ventilated areas, wear a SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

<u>Unusual Fire and Explosion Hazards</u>: In contact with moisture or water sufficient heat may be generated to ignite adjacent combustible materials. Sodium hydroxide solutions can react violently when in contact with chlorinated hydrocarbons and metals such as aluminum, zinc or materials galvanized with zinc with resultant generation of hydrogen.

# **SECTION V - REACTIVITY**

Stability: Stable

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Not combustible.

Incompatibility (Materials to Avoid): This product reacts with water generating heat. Do not add water to this product, always add caustic to water slowly and in small amounts to avoid boiling and spattering. This product reacts violently or explosively with chlorinated hydrocarbons. It attacks leather and wool resulting in destruction of those materials and possible chemical exposure to the individual. Caustic solutions can generate hydrogen gas on contact with aluminum, zinc or materials galvanized with zinc.

# **SECTION VI - HEALTH HAZARD DATA**

Threshold Limit Value: 2 mg/m<sup>3</sup> - Ceiling.

Permissible Exposure Limit (PEL): 2 mg/m<sup>3</sup>

<u>Primary Routes of Exposure</u>: Inhalation, skin and eye contact.

<u>Effects of Overexposure</u>: This material is extremely corrosive to all body tissue. Skin contact will result in severe burns and frequently with deep ulceration. Eye contact will produce severe and painful injury. Inhalation of mist will cause irritation and may even cause damage to the entire respiratory tract varying from mild irritation of mucous membranes to severe pneumonitis. Symptoms may not be immediately painful or visible. Swallowing usually results in severe injury.

# Emergency and First Aid Procedures:

Inhalation: Remove affected individual to fresh air. Obtain medical attention immediately.

<u>Eye Contact</u>: Immediately flush eyes with lukewarm water for at least 15 minutes while lifting the upper and lower eyelids. Continue to flush the eyes if there is any indication of residual chemical. Seek medical attention immediately.

<u>Skin Contact</u>: Immediately remove contaminated clothing, and flush exposed area with lukewarm water for at least 15 minutes. Continue to flush skin if there is any indication of residual chemical. Seek medical attention immediately.

<u>Ingestion</u>: DO NOT INDUCT VOMITING! Immediately dilute by drinking water or milk, then neutralize with diluted vinegar or fruit juice.

# SECTION VII - SPILL & LEAK PROCEDURE

Steps to be taken in case material is released or spilled: Issue warning: CORROSIVE MATERIAL. Keep non-essential personnel away from spill area. Wear rubber protective clothing, e.g., gloves, boots, aprons, and chemical splash goggles and face shield. Do not touch spilled material. Contain the spill and use absorbents and pumps to remove "ponded" liquid. Transfer the spilled material to caustic resistant containers labeled: CORROSIVE. Avoid flushing chemical into public sewers or water system. With careful handling, dilute acid, preferable acetic acid, may be used to neutralize final traces of caustic. Flush the cleaned area with water.

Waste Disposal Method: HAZARDOUS WASTE. EPA Hazardous Waste Number: D002 (if pH is greater than 12.5). Dispose of in a licensed hazardous waste disposal facility in accordance with all applicable Federal, State & Local health and pollution laws and regulations. (See 40 CFR 261).

# **SECTION VIII - SPECIAL PROTECTION INFORMATION**

<u>Ventilation</u>: Ventilation should always be provided to draw mists and vapors away from workers to prevent routine inhalation. Ventilation should be adequate to maintain the ambient workplace atmosphere below the limits listed in Section II.

<u>Respiratory Protection</u>: Wear a NIOSH/MSHA-approved, airline or self-contained respirator whenever exposures exceed the limits listed in Section II. Use in accordance with the manufacturers use limitations and OSHA Standard 1910.134 (29 CFR).

Eye/Face Protection: Chemical goggles with full face shield.

<u>Skin Protection</u>: Wear impervious gloves (e.g. rubber), boots or shoes, coveralls or other protective clothing as appropriate to prevent contact with liquid. Check with glove/clothing manufacturers to determine materials resistant to the chemicals shown in Section II.

Do not smoke or consume food or beverages in the work area. Wash thoroughly after handling the product.

# **SECTION IX - SPECIAL PRECAUTIONS**

Material Handling: Do not breathe mists or vapors. Avoid skin and eye contact. Use under well-ventilated conditions. Utilize good personal hygiene practices, e.g., thoroughly washing after handling the product. Remove contaminated clothing and shower at once. Wash contaminated clothing before reuse. (Discard leather shoes.) PROVIDE A SAFETY SHOWER AND EYEWASH STATION IN THE WORK AND HANDLING AREAS.

<u>Storage</u>: Store in water-tight containers in a cool, dry place separate from the normal work area and away from materials that react with sodium hydroxide. Use corrosion resistant structural materials and lighting and ventilation systems in the storage area. Store in suitable, labeled containers and maintain in a tightly closed condition when not in use. Protect containers from physical damage. Post appropriate warning signs.

# **SECTION X - HAZARD CODES**

NFPA (1997) <u>HMIS</u>

(National Fire Protection Association) (Hazardous Materials Identification System)

Health:3Health:3Flammability:0Flammability:0Reactivity:1Reactivity:1Special:CorrosivePersonal Protection:X

Key:

0 = Insignificant \* See MSDS for specific protection

1 = Slight

2 = Moderate

3 = High

4 = Extreme

# **USER'S RESPONSIBILITY**

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of the user's operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained within this bulletin should be provided to the user's employees or customers. Westlake CA&O Corporation must rely upon the user to utilize this information to develop appropriate work practice guidelines and employee instructional programs for his or her operation.

# DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this material. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state and local laws and regulations remains the responsibility of the user.

# SHIPPING INFORMATION

# **IDENTIFICATION - DOMESTIC TRANSPORTATION**

Proper Shipping Name (172.101(c)): SODIUM HYDROXIDE SOLUTION (Technical Name(s)) 172.203(k): (Contains 25% Sodium Hydroxide)

Hazard Class 172.101(d): 8 UN/NA# 172.101(e): UN 1824 Haz. Substance 171.8: Sodium Hydroxide Reportable Quantity: 1,000 Lbs

Inhalation Hazard 172.2a(b): N/A

Package Code 172.101(f): PG II Placarded: CORROSIVE

# PACKAGING (Part 173)

◆ Packaging Section (172.101(i)) – (Col. 8(A): 173.154)(Col. 8(B): 173.202)(Col. 8(C): 173.242)

♦ General Packaging Section - General 173.24 Hazard Class: CORROSIVE

# **MARKING**

A. Proper Shipping Name (172.301(a)) (Technical Name) (172.301(b))

B. UN/NA Number (172.301(a))

C. Name & Address (172.301(d))

D. THIS END UP (172.312(a))

E. Hazardous Substance RQ (Name) (172.324)

ORM Designation (172.316(a)) Inhalation Hazard (172.313(a))

# DOMESTIC LABELING

- 1. HMT LABELS (172.400)
- 2. Additional Subsidiary Hazard (172.402(a))

\_\_\_\_\_\_

# D. THIS END UP (If Applicable) A. Proper Shipping Name (Technical Name B. UN/NA Number E. (Haz. Substance) RQ Cargo Only ADD C. To: Name and Address From: Name and Address

# IATA 2005 Edition

Proper Shipping Name (Col. B): Sodium Hydroxide Solution

Class/Division (Col. C): 8 Subsidiary Risk (Col. D): N/A

UN/ID# (Col. A): UN 1824

Carrier Special Provisions (Col. M): A3

# PACKAGING

Max. Qty. Per Pkg. (Cols. H/J) - Passenger: 1 Liter
 Cargo: 30 Liters
 Packaging Instructions (Cols. G/I) - Passenger: 809
 Cargo: 813



March 8, 2010

Massachusetts Department of Environmental Protection Division of Watershed Management Attn: Mr. Robert Kubit 627 Main Street, 2<sup>nd</sup> Floor Worcester, MA 01608

Reference: Request for Change in pH Range

Residential Property 44 School Street Arlington, MA RGP #MAG910391 RTN #3-27857

Dear Mr. Kubit:

ENPRO Services, Inc. (ENPRO), on behalf of our client Nexus, Inc., operates a groundwater pump and treat system at the address referenced above to address a release of #2 fuel oil. The system was installed as part of a Massachusetts Contingency Plan Immediate Response Action (IRA). ENPRO applied for and received authorization for discharge under the USEPA Remediation General Permit (RGP) program (Authorization #MAG910391). The system discharges to surface waters via the Arlington municipal storm drain system.

On June 3, 2009 ENPRO submitted the IRA Status Report No. 2 and Plan Modification to the Massachusetts Department of Environmental Protection (MassDEP) Bureau of Waste Site Cleanup (BWSC). In that document, ENPRO proposed a targeted chemical oxidation application of activated sodium persulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub>) in an attempt to address the residual petroleum contaminated soil located beneath the basement floor and exterior to the residence. The sodium persulfate was to be injected under alkaline conditions produced by first injecting a sodium hydroxide solution. ENPRO received presumptive approval of the written plan following the 21-day review period.

12 Mulliken Way, Newburyport, MA 01950 (978) 465-1595 - FAX (978) 465-2050



On July 29, 2009, ENPRO oversaw the application of the alkaline persulfate as described in the June 3, 2009 IRA Plan Modification. The solution injected exhibited a pH of approximately 12. Shortly after application and the initial increase in pH in the groundwater monitored at the points closest to oxidant application, ENPRO observed a reduction in the pH in groundwater. The pump and treat system was subsequently shut down for a period of time. ENPRO subsequently restarted the treatment system when the effluent was within the allowable pH range.

The baseline pH results for the groundwater at the Site prior to the application of the persulfate indicated levels ranging from 5.28 in MW-5 to 6.27 in MW-7 (see attached Table 1). Site features, including monitoring well and recovery well locations are shown on the attached Figure 2. During the February 2010 sampling event, ENPRO collected a sample from the effluent of the treatment system and observed that the pH was 6.17 (below the existing RGP authorization discharge limit of 6.5). ENPRO subsequently shut down the system and evaluated site conditions. As part of a plan to resume groundwater pumping, treatment and discharge, ENPRO has prepared this request to lower the allowable pH range in the effluent from the system.

On March 3, 2010, groundwater samples collected from monitoring wells MW-1 (inferred to be cross gradient of the release/oxidant application area based on several rounds of gauging and elevation survey) and MW-7 (inferred to be upgradient of the release/oxidant application area based on groundwater elevation survey) exhibited pH levels of 6.20 and 6.24, respectively. Samples collected from recovery wells RW-1 and RW-2 exhibited pH levels at 6.02 and 5.53, respectively. Based on the baseline results and recent observations of the groundwater, ENPRO requests a change in the allowable pH range from 6.5-8.3 to 6.0-8.3.

In addition to this request for a change in the allowable pH range, ENPRO proposes the installation of a pH adjustment system in the event that the allowable pH range is not obtainable. Installation and approval of the pH adjustment system will allow for the uninterrupted discharge of the pump and treat system. The proposed installation of a pH adjustment system will be the subject of an IRA Plan Modification to be submitted to MassDEP BWSC shortly.

ENPRO proposes the installation of a pH adjustment system to include a chemical feed pump, pH monitoring probe, a controller and tank mixer. Neutralization will be performed using a moderate-concentration, sodium

ENPRO Services, Inc.

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hydroxide solution or other suitable source of alkalinity to be injected into the existing equalization tank of the treatment system. The pH monitoring and neutralization system will automatically provide the appropriate dosage to maintain the effluent in the acceptable pH range.

Upon your approval of a revision to the acceptable pH range for discharge to 6.0 to 8.3, ENPRO will prepare and submit an IRA Plan Modification to the MassDEP, and a Notice of Change (NOC) to the USEPA.

Please do not hesitate to contact me at (978) 465-1595 if you have any questions or require any additional information.

Sincerely.

Michael E. Coty Project Manager

Enc.

Cc: U.S. Environmental Protection Agency via email

Mass. Dept. of Environmental Protection NERO 205B Lowell Street Wilmington, MA 01887

Mr. Edward Sacco, Executive Director Nexus, Inc. 888 Main Street Woburn, MA 01801

ENPRO Services, Inc.

12 Mulliken Way, Newburyport, MA 01950 (978) 465-1595 – FAX (978) 465-2050

www.enpro.com



# COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Watershed Management, 627 Main Street 2nd Floor, Worcester, MA 01608

DEVAL L. PATRICK Governor

TIMOTHY P. MURRAY Lieutenant Governor IAN A. BOWLES Secretary

LAURIE BURT

Mr. Michael Coty 12 Mulliken Way Newburyport MA 01950 March 15, 2010

Re: Change in pH Range Request 44 School St., Arlington RGP #MAG910391 RTN #3-27857

Dear Mr. Alvarez,

The Massachusetts Department of Environmental Protection, Division of Watershed Management (the Department) has reviewed your request for a variance under the NPDES Remediation General Permit in order to discharge treated groundwater to a storm drain that flows into the Mystic River, a Class B surface water body. Attached to your letter dated March 8, 2010 is a summary of groundwater analytical results from the site referenced above which demonstrates the naturally occurring pH in the vicinity is approximately 5.3-6.3.

It is a state requirement that surface water discharges to Class B waters have a pH range of 6.5 - 8.3 and a Federal requirement allows for the pH of a surface water discharge to have a lower limit of 6.0.

Based on the evidence presented, the Department recommends approval of using a lower pH limit of 6.0 for the discharge limitation from this site.

If you have any questions or comments, please contact me at 508-767-2854.

Sincerely

Robert Kubit, P.E.

HXOF

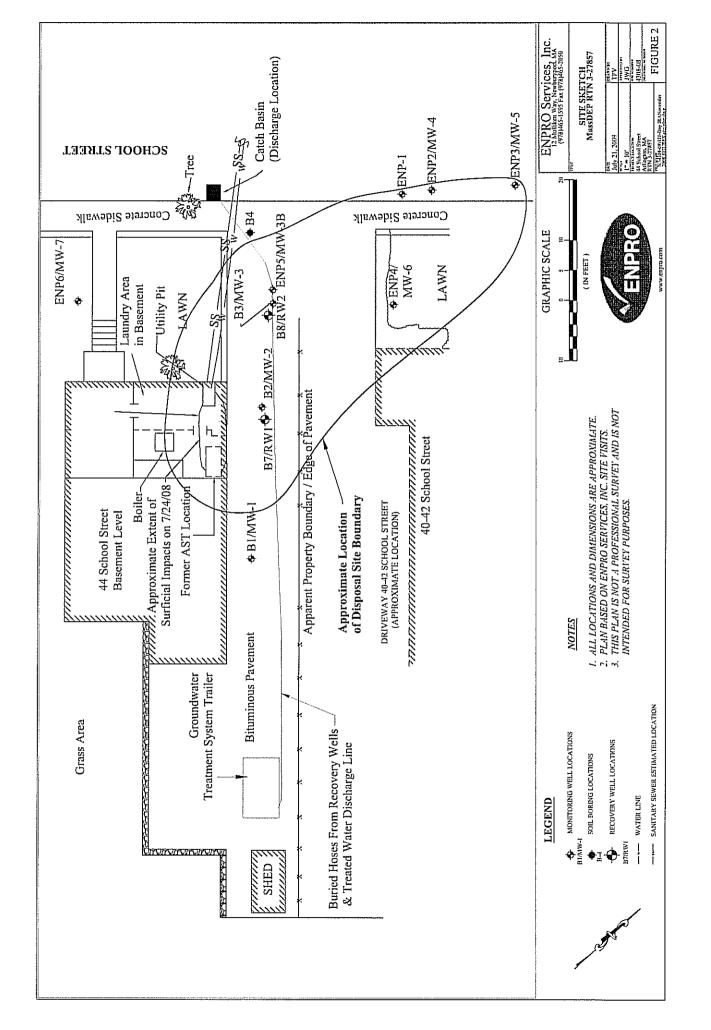
The control of the co



# Table 1 Summary of Groundwater Analytical Results - Fleid Parameters MassDEP RTN 3-27867 44 School Street Arlington, MA July 29 to August 6, 2009

Parameter			Baselino			٠.	2	Post Injection					Post Injection	Jection		
	MW-1	MW-3B	MW-5	MW-6	WW-7	MW-1	MW-3B	MW-5	MW-6	MM-7	MW-1	MW-3B	MW-5	MW-6	MW-7	RW-1
Date	7/29/2009	7/29/2009	7/29/2009	7/29/2009	6002/62//	7/29/2009	7/29/2009	7/29/2009 7	7129/2009 7	1/29/2009	8/6/2009	8/6/2009	8/6/2009	8/6/2009	8/6/2009	8/6/2009
Time		Pre	Pre injection Baseline	lne		1:56	12:39	2:00	2:05	1:51	RN	۳ ا	Α. E	꿈	EN.	RN R
Temperature C	14.13	18.9	16.43	15.11	15,07	19,81	19.47	15.41	15.71	16.08	16	13,45	12.28	12.15	13.39	14.35
hd	6.02	60'9	5.28	5.53	6.27	6.75	13.31	6,32	6.08	7.5	5.46	4.44	5.48	5,63	5.76	5.5
ORP	119	116	132	125	119	456	281	484	426	494	238	283	211	174	229	337
Specific Conductivity	1.018	0.0001	0.945	0	1.136	0.0001	81	0.953	726.0	1,206	1,13	8.38	1.04	2.91	0.513	5.87
Dissolved Oxygen	5.6	1.82	Б	2.51	3,66	6.45	0.65		3.93	5.66	5.59	9.36	4.4	1.88	6.6	2.83
Sulfate - Test Strip mg/L	200-400	200~400	200-400	200-400	200-400	200-400	>1600	200-400	200-400	200-400	200-400	>1600	200-400	800-1200	200-400	>1600
Sulfate - Lab, mg/L (See Note 1)	21	) 1N	TN	21	22	TN	Þ	IN	IN	TN	TN.	ŢŅ	TN	F	Ž	Ä

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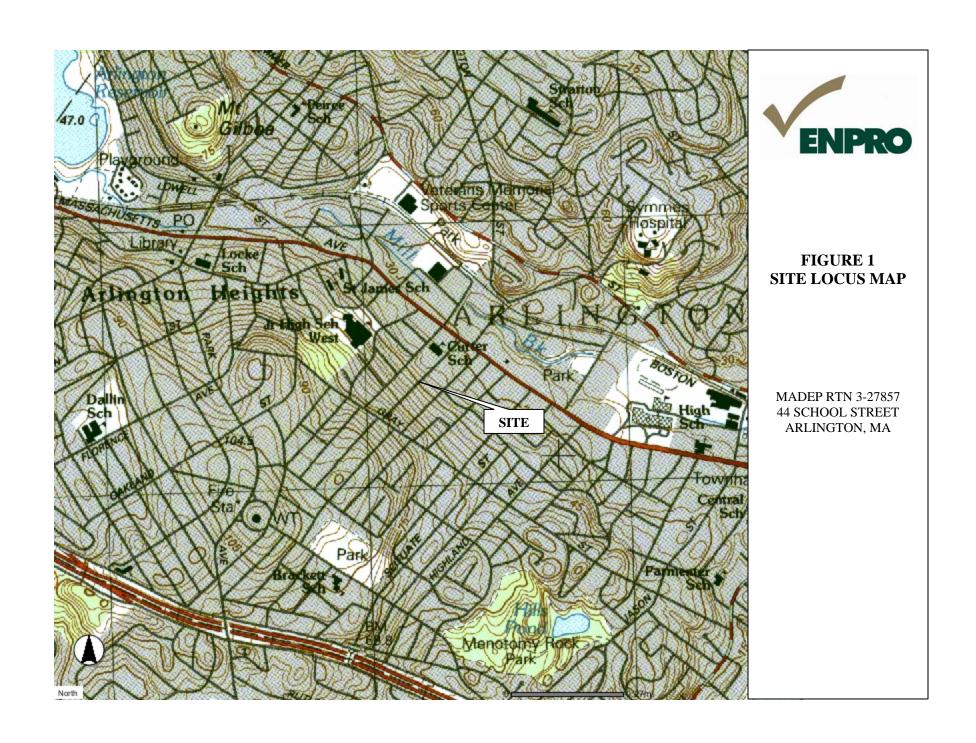
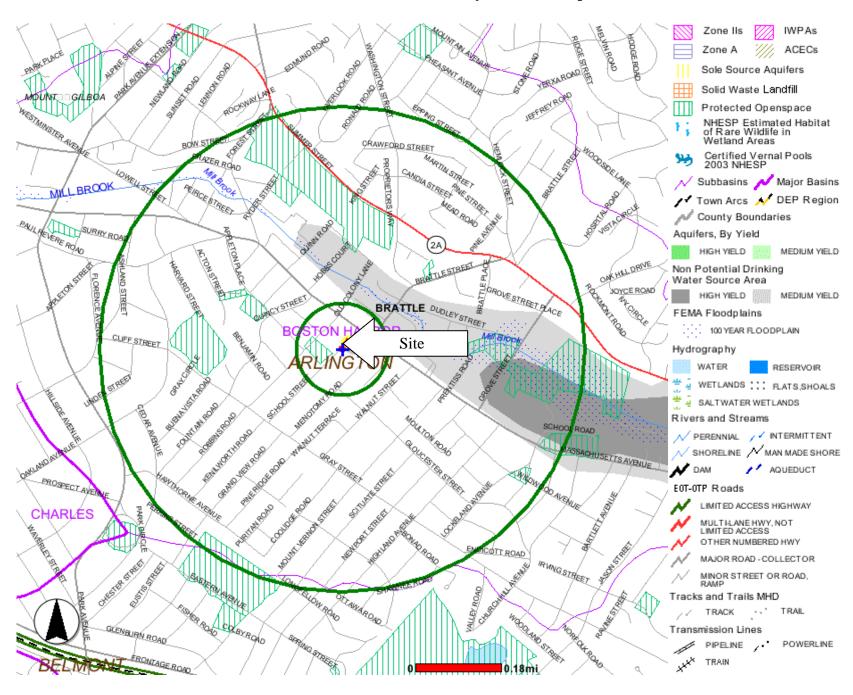
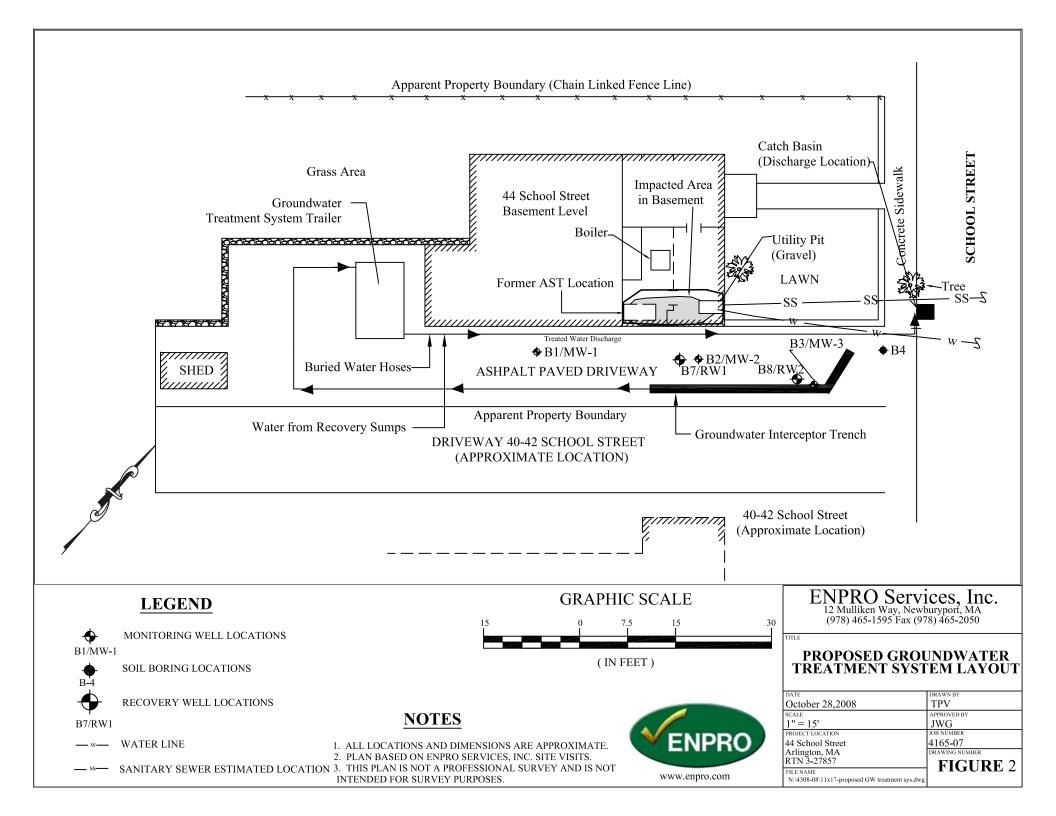
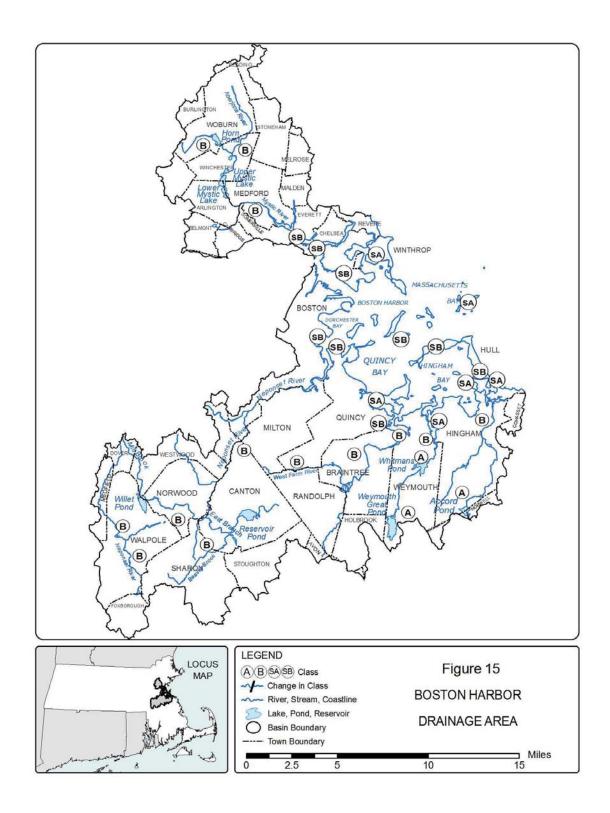


FIGURE 3 - MassDEP Priority Resource Map





4.06: continued





# Massachusetts StreamStats

# **Streamstats Ungaged Site Report**

Date: Tue Sep 21 2010 09:29:42 Mountain Daylight Time

Site Location: Massachusetts
NAD27 Latitude: 42.4201 (42 25 12)
NAD27 Longitude: -71.1678 (-71 10 04)
NAD83 Latitude: 42.4202 (42 25 13)
NAD83 Longitude: -71.1673 (-71 10 02)

ReachCode: 01090001022413

Measure: 44.38 Drainage Area: 4.37 mi2

Low Flows Basin Characteristics			
100% Statewide Low Flow (4.37 mi2)			
Parameter	Value	Regression Equ	ation Valid Range
Falanetei		Min	Max
Drainage Area (square miles)	4.37	1.61	149
Mean Basin Slope from 250K DEM (percent)	2.98	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	0.17	0	1.29
Massachusetts Region (dimensionless)	0	0	1

Probability of Perennial Flow Basin 100% Perennial Flow Probability (4.37 mi2)			
Parameter	Value	Regression Equ	ation Valid Range
Parameter		Min	Max
Drainage Area (square miles)	4.37 (above max value 1.99)	0.01	1.99
Percent Underlain By Sand And Gravel (percent)	42.50	0	100
Percent Forest (percent)	13.32	0	100
Massachusetts Region (dimensionless)	0	0	1

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Low Flo	ow Flows Streamflow Statistics								
			Equivalent	90-Percent Pre	diction Interval				
Statistic	Flow (ft <sup>3</sup> /s)	Prediction Error (percent)	years of record	Minimum	Maximum				
D50	4.3	18		2.06	8.92				
D60	3.06	20		1.48	6.27				
D70	1.84	24		0.89	3.79				
D75	1.42	26		0.68	2.93				
D80	1.2	28		0.56	2.57				
D85	0.89	32		0.4	1.98				
D90	0.69	37		0.29	1.58				
D95	0.4	46		0.15	1.03				
D98	0.25	60		0.0799	0.74				
D99	0.18	65		0.0549	0.57				
M7D2Y	0.4	50		0.14	1.07				
AUGD50	0.94	33		0.41	2.12				
M7D10Y	0.17	71		0.0472	0.56				

The equation for estimating the probability of perennial flow is applicable for most areas of Massachusetts except eastern Buzzards Bay, Cape Cod, and the Island regions. The estimate obtained from the equation assumes natural flow conditions at the site. The equation also is best used for sites with drainage areas between 0.01 to 1.99 mi2, as errors beyond for basins beyond these bounds are unknown.

Probability	of Pe	rennial Flow Statistics
Statistic	Value	Standard Error (percent)
PROBPEREN	0.99	

# Massachusetts Category 5 Waters "Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	POLLUTANT NEEDING TMDL [EPA APPROVAL DATE-DOCUMENT CONTROL NUMBER]				
Chelsea River (7138100)	MA71-06	Confluence with Mill Creek, Chelsea/Revere to confluence with Mystic River, Chelsea/East Boston/Charlestown.	0.39 sq mi	-Priority organics -Unionized Ammonia -Organic enrichment/Low DO -Pathogens -Oil and grease -Taste, odor and color -Turbidity -(Objectionable deposits*)			
Clay Pit Pond (71011)	MA71011	Belmont	11.9 acres	-Pesticides			
Ell Pond (71014)	MA71014	Melrose		-Nutrients -Pathogens -Suspended solids			
Horn Pond (71019)	MA71019	Woburn		-Nutrients -Organic enrichment/Low DO -Noxious aquatic plants			
Judkins Pond (71021)	MA71021	Winchester	2.8 acres	-Nutrients -Organic enrichment/Low DO -Pathogens			
Lower Mystic Lake (71027)	MA71027	Arlington		-Cause Unknown -Organic enrichment/Low DO -Salinity/TDS/chlorides			
Malden River (7138200)	MA71-05	Headwaters south of Exchange Street, Malden to confluence with Mystic River, Everett/Medford.	2.5 miles	-Pesticides -Priority organics -Organic enrichment/Low DO -Pathogens -Oil and grease -Taste, odor and color -Suspended solids -(Objectionable deposits*)			
Mill Brook (7138300)	MA71-07	Outlet of Arlington Reservoir to inlet of Lower Mystic Lake, Arlington (portions culverted underground).	2.8 miles	-(Other habitat alterations*) -Pathogens			
Mill Creek (7138125)	MA71-08	From Broadway/Route 107, Chelsea/Revere to confluence with Chelsea River, Chelsea/Revere		-Pathogens			
Mill Pond (71031)	MA71031	Winchester		-Organic enrichment/Low DO -Pathogens			
Mystic River (7138150)	MA71-02	Outlet Lower Mystic Lake, Arlington/Medford to Amelia Earhart Dam, Somerville/Everett.	5.0 miles	-Pesticides -Priority organics -Metals -Nutrients -Pathogens			

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Stage
Birds	Arctic peregrine Falcon (Falco		Recovery	Fairbanks Fish And Wildlife		
Flowering Plants	Small whorled pogonia (Isotria		Threatened	New England Ecological	Small Whorled Pogonia	Final Revision 1
Flowering Plants	Sandplain gerardia (Agalinis		Endangered	Long Island Ecological Services	Sandplain Gerardia	Final



# **Species Profile**

**Environmental Conservation Online System** 

(http://www.fws.gov)

# Small Whorled pogonia (Isotria medeoloides)

Kingdom: Plantae Class: Liliopsida Order: Orchidales Family: Orchidaceae

Listing Status: Threatened

 Quick links:
 Federal Register (#status)
 Recovery (#recovery)
 Critical Habitat

 (#crithab)
 Conservation Plans (#conservationPlans)
 Petitions (#petitions)
 Life

History (#lifeHistory) Other Resources (#other)

Lead
Region:
Northeast
Region
(Region
5)

# Map of Species occurrence



This map represents our best available information about where a species is currently known to occur; however, it should **NOT** be used as an official species list for Section 7 Consultation purposes. To obtain an official species list for this purpose, please contact the Fish & Wildlife Office near you (click here: <a href="http://www.fws.qov/offices/">http://www.fws.qov/offices/</a>)

(http://www.fws.gov/northeast/)

Date Listed: Sep 9, 1982

States/US Territories in which the Small Whorled pogonia is known to occur: Connecticut

(/speciesProfile/profile/countiesByState.action?entityId=742&state=Georgia), Illinois (/speciesProfile/profile/countiesByState.action?entityId=742&state=Illinois), Maine (/speciesProfile/profile/countiesByState.action?entityId=742&state=Maine), Massachusetts (/speciesProfile/profile/countiesByState.action?entityId=742&state=Massachusetts), Michigan (/speciesProfile/profile/countiesByState.action?entityId=742&state=Michigan), Missouri (/speciesProfile/profile/countiesByState.action?entityId=742&state=Missouri). New Hampshire (/speciesProfile/profile/countiesByState.action?entityId=742&state=New Hampshire), New Jersey (/speciesProfile/profile/countiesByState.action?entityId=742&state=New Jersey), New York (/speciesProfile/profile/countiesByState.action?entityId=742&state=New York), North Carolina (/speciesProfile/profile/countiesByState.action?entityId=742&state=North Carolina), Ohio (/speciesProfile/profile/countiesByState.action?entityId=742&state=Ohio), Pennsylvania (/speciesProfile/profile/countiesByState.action?entityId=742&state=Pennsylvania), Rhode Island (/speciesProfile/profile/countiesByState.action?entityId=742&state=Rhode Island) South Carolina (/speciesProfile/profile/countiesByState.action?entityId=742&state=South Carolina), Tennessee (/speciesProfile/profile/countiesByState.action?entityId=742&state=Tennessee), Virginia (/speciesProfile/profile/countiesByState.action?entityId=742&state=Virginia), West Virginia (/speciesProfile/profile/countiesByState.action?entityId=742&state=West Virginia) US Counties in which the Small Whorled pogonia is known to occur: View All (/speciesProfile/profile/countiesBySpecies.action?entityId=742) Countries in which the the Small Whorled pogonia is known to occur: Canada

# » Federal Register Documents

# Most Recent Federal Register Documents (Showing 5 of 5)

Date	Citation Page	Title
		Initiation of a 5-Year Review of Ten Listed Northeastern Species
01/29/2007	72 FR 4018 4019	(http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?
		dbname=2007 register&docid=fr29ja07-49)
		ETWP; Final Rule to Reclassify the Plant Isotria medeoloides (Small
10/06/1994	59 FR 50852 50857	Whorled Pogonia) From Endangered to Threatened
		(http://ecos.fws.gov/docs/federal_register/fr2715.pdf)
		ETWP; Proposed Rule To Reclassify the Plant Isotria Medeoloides (Small
10/19/1993	58 FR 53904 53909	Whorled Pogonia) From Endangered to Threatened
		(http://ecos.fws.gov/docs/federal_register/fr2445.pdf)
		ETWP; Determination of Isotria medeoloides (small whorled pogonia) To
09/09/1982	47 FR 39827 39831	Be an Ednangered Species
		(http://ecos.fws.gov/docs/federal_register/fr621.pdf)
09/11/1980	45 ED 50000 5004 4	Proposal to Determine Isotria meleoloides (Small Whorled Pogonia) to be
	45 FR 59909 59914	an Endangered Species (http://ecos.fws.gov/docs/federal_register/fr471.pdf)

# » Recovery

Recovery Plan Information Search (/roar/pub/ConfigureRecActionReport.do?path=ROAR Custom

# Information Search FAQs (http://www.fws.gov/endangered/recovery/ROAR\_FAQs%2008-05-09 FINAL.pdf)

# **Current Recovery Plan(s)**

Date	Title	Plan Action Status	Plan
11/13/1992	Small whorled Pogonia  (http://ecos.fus.gov/doss/recovery_plan/921113h.pdf)	View Implementation Progress (/roar/pub/planImplementationStatus.action? documentId=600315&entityId=742)	Final Revis

# Other Recovery Documents (Showing 1 of 1)

Date	Citation Page	Title	Document Type
		Initiation of a 5-Year Review of Ten Listed Northeastern	Notice 5-year
01/29/2007		Species (http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?	,
		dbname=2007 register&docid=fr29ja07-49)	Review, Initiation

### **Five Year Review**

Date	Title
10/16/2008	Small Whorled Pogonia Completed 5 Year Review (/docs/five_year_review/doc2002.pdf)

# » Critical Habitat

No critical habitat rules have been published for the Small Whorled pogonia.

# » Conservation Plans

No conservation plans have been created for Small Whorled pogonia

# » Petitions

No petition findings have been published for the Small Whorled pogonia.

# » Life History

No Life History information has been entered into this system for this species.

### » Other Resources

NatureServe Explorer Species Reports (javascript:;) -- NatureServe Explorer is a source for authoritative conservation information on more than 50,000 plants, animals and ecological communities of the U.S and Canada. NatureServe Explorer provides in-depth information on rare and endangered species, but includes common plants and animals too. NatureServe Explorer is a product of NatureServe in collaboration with the Natural Heritage Network.

<u>ITIS Reports (javascript::)</u> -- ITIS (the Integrated Taxonomic Information System) is a source for authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

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# **Species Profile**

**Environmental Conservation Online System** 

# (http://www.fws.gov)

# Sandplain gerardia (Agalinis acuta)

Kingdom: Plantae Class: Magnoliopsida Order: Scrophulariales Family: Scrophulariaceae

Listing Status: Endangered

 Quick links:
 Federal Register (#status)
 Recovery (#recovery)
 Critical Habitat

 (#crithab)
 Conservation Plans (#conservationPlans)
 Petitions (#petitions)
 Life

 History (#lifeHistory)
 Other Resources (#other)

Lead
Region:
Northeast
Region
(Region
5)

# Map of Species occurrence



This map represents our best available information about where a species is currently known to occur; however, it should **NOT** be used as an official species list for Section 7 Consultation purposes. To obtain an official species list for this purpose, please contact the Fish & Wildlife Office near you (click here: <a href="http://www.fws.qov/offices/">http://www.fws.qov/offices/</a>)

# (http://www.fws.gov/northeast/)

Date Listed: Sep 7, 1988

States/US Territories in which the Sandplain gerardia is known to occur: Connecticut

(/speciesProfile/profile/countiesByState.action?entityId=876&state=Connecticut), Maryland

//speciesProfile/profile/countiesByState.action?entityId=876&state=Maryland), Massachusetts

(/speciesProfile/profile/countiesByState.action?entityId=876&state=New York), Rhode Island (/speciesProfile/profile/countiesByState.action?entityId=876&state=Rhode Island)

**US Counties** in which the Sandplain gerardia is known to occur: <u>View All</u>

(/speciesProfile/profile/countiesBySpecies.action?entityId=876)

**USFWS Refuges** in which the Sandplain gerardia is known to occur: MASHPEE NATIONAL WILDLIFE REFUGE, WERTHEIM NATIONAL WILDLIFE REFUGE

# » Federal Register Documents

# Most Recent Federal Register Documents (Showing 3 of 3)

Date	Citation Page	Title
		Initiation of 5-Year Reviews of 10 Listed Species
01/23/2008	73 FR 3991 3993	(http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?
		dbname=2008 register&docid=fr23ja08-72)
00/07/4000	E2 ED 24704 2470E	Determination of Agalinis acuta (Sandplain gerardia) to be End. Species;
09/07/1988	53 FR 34701 34705	53 FR 34701-34705 (http://ecos.fws.gov/docs/federal_register/fr1467.pdf)
		Proposal to Determine Agalinis acuta (Sandplain Geradia) to be End.
11/19/1987	52 FR 44450 44453	Species; 52 FR 44450-44453
		(http://ecos.fws.gov/docs/federal_register/fr1353.pdf)

# » Recovery

Recovery Plan Information Search (/roar/pub/ConfigureRecActionReport.do?path=ROAR Custom Queries.Public Actions AdHoc)

 Information Search FAQs (http://www.fws.gov/endangered/recovery/ROAR\_FAQs%2008-05-09\_FINAL.pdf)

# **Current Recovery Plan(s)**

Date	Title	Plan Action Status	Plan §
09/20/1989	Sandplain Gerardia  (http://ecos.fws.gov/docs/recovery_plan/890920.pdf)	View Implementation Progress (/roar/pub/planImplementationStatus.action?documentId=600300&entityId=876)	Final

# Other Recovery Documents (Showing 1 of 1)

Date	Citation Page	Title	<b>Document Type</b>
		Initiation of 5-Year Reviews of 10 Listed Species	Notice 5-year
01/23/2008	73 FR 3991 3993	(http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?	,
		dbname=2008_register&docid=fr23ja08-72)	Review, Initiation

# » Critical Habitat

No critical habitat rules have been published for the Sandplain gerardia.

# » Conservation Plans

# » Petitions

No petition findings have been published for the Sandplain gerardia.

# » Life History

No Life History information has been entered into this system for this species.

### » Other Resources

NatureServe Explorer Species Reports (javascript::) -- NatureServe Explorer is a source for authoritative conservation information on more than 50,000 plants, animals and ecological communities of the U.S and Canada. NatureServe Explorer provides in-depth information on rare and endangered species, but includes common plants and animals too. NatureServe Explorer is a product of NatureServe in collaboration with the Natural Heritage Network.

<u>ITIS Reports (javascript:;)</u> -- ITIS (the Integrated Taxonomic Information System) is a source for authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

Last updated: October 12, 2010

FWS Endangered Home (http://www.fws.gov/endangered/) | ECOS Home (/ecos\_public/) | Contact Us (/ecos/helpdesk.do?version=SPECIES\_PROFILE-1\_2\_36)





# Table 1 Summary of Groundwater Treatment System Sampling and Results

### RGP Authorization # MAG910391 Residential Property 44 School Street Arlington, MA

### Table Updated on 10/12/2010

Analytical Parameter		o-10 2/10	Mar 03/1	r-10 8/10	Apr 4/13/			y-10 /2010		n-10 2010	Jul 7/16/	-10 2010		g-10 /2010	Sep-10 9/15/2010		RGP Effluent Limits 5-10 Dilution (Limit/ML)
	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	
Totalizer Reading (gals)	150	,565	150	,565	194	054	223	,151	236	,894	243	,916	245	,189	246	,433	
TPH - EPA Method 1664, mg/L	<5.0	<5.0	7.31	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Total Metals																	
Copper, ug/L	2.4	<10	6.3 J	<10	3.9JB	2.9JB	2.2J	<10	1.9J	2.81J	34	2.0J	11	2.8J	4.5JB	4.2JB	26
Iron, ug/L	3,100	<100	29,000	<100	2,900	34J	4,400	<100	4,400	<100	14,800	91	17,000	24J	33,000	77J	5000
Selenium, ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	3.9	<15	<15	<10	<10	<10	<10	25
VOCs per 8260B (Only required Parameters Presented)																	
Benzene, ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5
Toluene, ug/L	<1.0	<1.0	<1.0	<1.0	0.28J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	see BTEX
Ethylbenzene, ug/L	<1.0	<1.0	1.2	<1.0	1.3	<1.0	0.30J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	see BTEX
Total Xylenes, ug/L	0.94 J	<2.0	2.2	<2.0	9.5	<2.0	0.64J	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	see BTEX
Total BTEX, ug/L	0.94 J	<2.0	3.4	<2.0	11.08	<2.0	0.94J	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	100
Naphthalene, ug/L	6.0	<5.0	<5.0	<5.0	<5.0	<5.0	3.9J	<5.0	0.88	<5.0	<5.0	<5.0	<5.0	<5.0	0.28J	<5.0	20
TSS, mg/L	6.7	<2.0	32	<5.0	8.0	<5.0	<5.0	<5.0	<5.0	<5.0	68	<5.0	55	<2.0	<10	<2.0	30
pH, (standard Units)	**	**	6.20	6.21	6.7	6.22	7.0	6.88	6.6	6.81	6.40	6.20	6.32	6.03	6.70	6.04	6.0-8.3

J = Estimated Value below laboratory reporting limit.

Metals limits based on Appendix IV - Total Recoverable Metals Limitations at calculated dilution ranges and ceiling limits at facilititys in MA.

# Notes:

B = Contaminant detected in method blank. Contaminant may not be present in actual samples at that concentration.

<sup>&</sup>lt; = Less than laboratory reporting limit.

pH, flow rate, and total flow monitored in field.

<sup>\*\* -</sup> pH below discharge requirements. Discharge held until March 18, 2010

<sup>1).</sup> pH range modified to 6.0-8.3 per RGP modifaction approval March 2010.